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The Low Band Monitor

Thank You March!

The month of March provided a nice comeback from the rather disappointing conditions experienced in February. Conditions were not great but consider: The TI9CF operation from Coco's Island. A chip shot from the U.S., but a nice "new one" for many. DJ2BW/FH made a brief appearance from Mayotte on 80 meters. Illusive TL8NG was on both 80 and 160 meters.

The Pacific "woke up" with P29, V6, V7, V8, JD1 and AH8 being heard. Although the T33KK and T33CS operation did not get on 160 meters, they still gave many people a new one on 40 and 80 meters. The Pratus Operation, although controversial, certainly helped your DX blood circulation.

Pratus: A Wake Up Call

There has been a lot said about the Pratus operation. I wanted this one to count as a new country for one reason. The first operation from Pratus a few months ago, produced about 400 contacts in four hours. There were no contacts made with North America and thus no contacts made with the United States of America, one of the greatest political and economic powers of the world in years past.

If you follow DXCC matters, QSL printing schedules and the reporting of "Top of the Honor Roll" holders carefully; you would have noticed that there was a potential (if the first Pratus operation counted) for having no one in the U.S. on the DXCC "Top of the Honor Roll".

To me this would have given the traditional U.S. Amateur a real wake up call. Isn't it fitting that the region of the world that builds most of the radios has all of the people at the top?

Would this be another reminder that our society is truly in the midst of a dramatic decline?

S.A.T. (Student Aptitude Test) scores have been dropping since 1968, when Don Miller was still walking the streets. We are a debtor nation. Our cities are no longer viable places to live. Our corporations are no longer able to control their fates. We rate 12th in the world in infant mortality. Losing our dominance of the DXCC ranks is certainly another logical step in our decline.

Just think about this for awhile. A DXCC "Top of the Honor Roll" with only Asian stations. Remember the theme, "Why can't Johnny read?" American hams would soon be muttering, "Why can't Johnny work DX?"

This scenario is still possible if the DX Advisory Committee and the principals of the operation come to mutually agreeable terms.

Let's hope that the Pratus operation counts and that the whole DXCC "Top of the Honor Roll" gets toppled. We need new blood at the "Top of the Honor Roll". Think Global - Even if it hurts!

Last Minute Activity

I received a telephone call from Darrell, N6DX who reports that 9M0A was heard on March 3, 1994 at around 1300Z on 1.826mz. He was listening for stations around 1.905mz. in the JA window. No 40 or 80 meter activity has been reported as of this time.

Most of the West Coast has Spratly confirmed on the low bands, but this represents a great find for Midwest and East Coast stations.

N2KK DXpedition

The David Schoen, N2KK, DXpedition article from 1980 - 1981 will appear in two installments of the *Low Band Monitor* starting with this issue.. David's original manuscript was thirty- two pages long. This is one of the more informative articles you will ever read about the political, logistical and propagational conditions encountered on a multi-country trip of this kind.

I have copies of his amazing low band logs and will select the ST2/N2KK logs for publication next month. These are interesting entries, as actual signal reports are used, instead of the usual two way 5x9 report that is so common today.

The ST2/N2KK pileups were the most incredible 80 meter pileups in the history of low band DXing. This was one of the first operations that truly made the CQ Magazine 5 Band WAZ program viable.

Dayton and Visalia

The low band season established by the *Low Band Monitor* will end on April 15, 1994. It is appropriate for us to regroup at this time and pack our bags for Visalia or Dayton.

Both of these events enable us to compare notes with friends and acquaintances and reflect on developments in the hobby. Visalia is a wonderful gathering, a cerebral event that is geared to serving around 500 DXers, in a conference like setting. Serene and stylish, an event that tends to attract the articulate, the educated and those with style.

Real Men Go To Dayton

My first Dayton Hamvention™ was in 1970. I have attended every one of them since then and have learned over the years that the Dayton Hamvention™ is not a cerebral event. Dayton is a physical event.

The Flea Market typically sets the tone for the aerobic workout and should not be missed. Even if you have seven or eight figure money in the bank, it's a place to gage what is happening in the hobby.

Last year for example, I found four relatively new high end transceivers for sale at good price points made by one manufacturer.

Why would four hams from four different states be dumping six-month old, top end transceivers at 65 percent of cost? Do you think it's because they want to help their fellow amateur?

The Flea market also has some of the best stuff you will ever see. Sure it's down from the 70's and 80's but occasionally the "sleeper" from the backwoods of Kentucky will show up with the pick-up truck full of vacuum variables or prop pitch rotors.

One year I picked up a nice distributor for a 1959 Porsche 356-A at a good price. You just never know what you will find out there.

The DX, Antenna, and Contest Forums will sometimes attract around 1,000 people. Presentation quality has improved a bit over the years, but it takes diligent timing to get a good seat.

The commercial displays are definately not simple walk-bys here. The advent of computer based software for our hobby, new technologies like digital signal processing and new antenna designs require more than a few minutes at many of the hundreds of booths.

The DX Dinners, Contest Banquets and Hospitality Rooms are all located 10 - 15 miles from the main Hamvention™ facility and they also require sound logistical planning and execution. Do I sleep tonight or grovel for my Romeo Stepanenko QSL from North Korea? Is tonight a Club Soda or Heineken night?

Considering the effects of travel, the loss of sleep and the three day duration of the event, the Hamvention™ takes it's toll on many. If the weather during the weekend throws you a curve it can sometimes evolve into a survival course type of atmosphere. Leave the Gucci's at home!

Still, it is the best convention experience you can have in amateur radio. The opportunity to truly gain insight about the hobby is unmatched at any other event.

Lance Johnson - Editor

Around the World the Hard Way

A Look at One of the Great Low Band Operations - by David Schoen - N2KK

Editor's Note: David Schoen, N2KK's, DXpedition to 4S7KK, 8Q7KK, J20CN, N2KK/ST2 and 6U0KK started in October 1980 and ended in January of 1981. In my opinion it was the best low band operation in the history of ham radio. This article was written by David over a decade ago and has never before been presented in any amateur radio publication. David, spent $15,000 of his own money to make this trip and received a generous donation of $2,000 from the Northern California DX Foundation.

A Slow Start - After being up all night trying to remember anything I had forgot, in a state of nervous exhaustion, I left Los Angeles on Sunday, October 19, with a Yaesu 901DM in one hand and a Dentron MLA-2500 in the other. The first problem had occurred before I left, when Pan American Airlines announced a flight delay of several hours and ruined my connection in Hong Kong.

Since the flight to Sri Lanka is scheduled only once a week, and I knew that the next two flights were booked solid, my planned Tuesday arrival was in jeopardy. Since the CQWWDX Contest was next Saturday at 5:30 Sri Lanka time, the stakes were very high.

David Schoen, N2KK/ST2, shown at the shack of DF3NZ/ST2 in Khartoum, December 1980.

During the fueling stop, I noticed that some of the passengers shifted to a Japan Airlines flight, so I struggled onto the plane. In addition to the radio gear, I was also carrying a camera bag with two cameras, four lenses, light meter and a shoulder bag with notebooks and diary. This was a carry-on ensemble that would accompany me on this around the world trip on thirteen different airlines.

After four long flights and two days waiting on the ground, I arrived in Columbo, met by Ernest, 4S7EA and Paddy, 4S7PB. I had worked Paddy on 80 meters December 25, 1974 from WA2LTQ in the heart of New York City with a Delta Loop hanging between two 17-story buildings and remembered the joy of that contact. I had lost track of him after that time, but was pleased to see him at the airport. It was great to share 80 meter experiences with him.

I stayed at Ernest's house for two tumultuous weeks. First, the 400 pounds of air freight (antenna tuner, 80 meter vertical, Hy-Gain TH-2 and spare parts) put on the plane had disappeared entirely. Secondly my FT-901DM would not work, although Yaesu National Service had pronounced it in tip top condition.

Ernest, a fine technician spent a number of hours working on the Yaesu. Besides the curious fact that the finals were blown and a resistor out, it appeared that one or more of the mosfets or fets were out and these parts were not available in Sri Lanka. I began spending early mornings on 10 meters with Ernest's TS-520 and my MLA-2500 with Ernest's two element quad. I was able to work into the West Coast of the U.S. between 0200-0400 UTC. I would then trek down to the local Pan American Airlines office to try and locate the gear, which after a week, was found to have been off-loaded in Hong Kong. My initial relief was premature, as the freight would again be lost, this time in Bangkok, for another 4 days. When the freight finally arrived in Sri Lanka, I spent four hours discussing the merits of amateur radio with the customs people. Having a 4S7KK license certainly helped this always tricky process.

While substituting Yaesu 901DM parts back at Ernest's QTH we discovered that the Yaesu had a fault in the RF mixer section and after replacing a mosfet, the rig was back in action.

The CQWWDX Contest was obviously great fun from 4S7, but I had made the trip to put this country on 80 meters. The best part of the contest was working 10 meter longpath between 0400-0700 UTC. I was working W4's through W7's and W0's much stronger than the earlier short path openings. A simply beautiful opening! Ernest had also helped me put up a low 80 meter dipole about 30 feet high. I was surprised that N6ZV and W6KUT, among others could hear me.

The Maldives Operation - Now that the gear was safe and the transceiver repaired I left the next day for the Maldives in a state of real excitement because I felt that the trip was truly beginning. This was an extremely pleasant 45 minute hop over some of the most beautiful islands in the world; 2800 of them in fact. I was met by Noel, 8Q7AV, who is a pilot with the Maldive Security Forces and who sometimes flies the President of the Maldives around.

After the landing on one island , you take a boat (in my case a 35 minute ride on a "dhony", which is a big Arabic style motorized boat with a sail) and the another 25 minute ride by speedboat to my final destination.

I was headed for Bandos Island, where John Ackley, KP2A, had stayed before and recommended because it offered the only 24 hour electrical service on the islands. I set the vertical up on the beach one foot from the water with fourteen radials spread out, six going into the water, the Dentron MT-3000 tuner at the base of the antenna about 50 feet away from the small house where I was staying. A 20 foot mast was purchased on the main island for the TH-2 to complete the antenna arrangement. I was facing east and every morning watched the sun come up as I attempted to work DX on 80 meters.

The first evening that I operated with the vertical I knew it was a winner. Darrell, N6DX and Fred, AD6C, had together helped fabricate a homemade 80 meter vertical for me that was 55 feet high. This antenna was a real piece of spaghetti, that had to be guyed at two levels, but was strong enough to survive some pretty good wind storms. At sunset around 1300 UTC I began hearing voices. The noise level was very low and at 1311 UTC, the familiar voice of K6UA came pounding in with a 5x8 signal. The propagation seemed selective, as the band would open to just one geographic area at a time. Typically I would be on the air at 4:00 am local time, which is 23:00 UTC looking for East Coast stations. European stations were generally a 5x7 level or so, with stations like W1FC and W1CF being able to crest over them with 5x9 signals.

For some reason I had better propagation to the U.S near my sunrise than I did with Europe. There was a real peak to the states at that time, while it seemed that Europe maintained a more even signal strength. I never experienced any signal enhancement at my sunrise to Europe at all, from any of the locations on my trip.

The first morning on 80 meters I worked 58 stations including W0. About 20 percent of the reports were 5x7 to 5x9 but there were quite a number of 4x4 and 3x3 reports to. It was obvious on 80 meters more than any band the difference in receiving capability by stations in the same geographical area. It was also important to find a way to line everybody up, as people had a tendency to call at times when they weren't hearing very well. I preferred to work with stations like W1FC, W1CF, WA1EKV, WB2FZO, K2FV, K2LWR or K2BT who always heard me when an opening was there.

The next day I was on 10 meters all day dishing out contacts at a good pace, then later working 40 meter CW longpath into the U.S. At 1300 UTC while on 80 meters, I made a long CQ, as there was nothing on the band. I was so far away from everything when I finished, I heard a solid 5x9 voice say, "David?". I said, "Yes?", thinking it was one of my Asian friends. "It's Randy. What equipment are you using?" A two minute conversation about my situation ensued with a glowing amazement at this contact. Finally, after two minutes, I said, "Randy, would you give me a report?" He responded with, "Yeah, you're 5x9; 8Q7KK from W0MJ." A solid conversation on 80 meter longpath between Joplin, Missouri and the Maldives. Randy, W0MJ, with his Bobtail curtain array and me with a vertical on the beach, 11,500 miles away.

This was probably the most intense 75 meter pileup in the history of the hobby. Did you make it?

I worked some W9's also with 4x4 reports and Tom, N4KG, also showed up on the longpath. The reality of this session told me that there was a five "S" units difference between Randy, W0MJ, and most of the other Midwest stations. I did work K0ZZ and W0SD in South Dakota on 80 meter longpath with signals peaking at a solid 5x5. I could sense the excitement at the other end when I worked Gary, K0ZZ and many others over this tough path. I'm sure Gary had had a good day after making the contact. *Editor's note: Gary, K0ZZ, became a Silent Key in 1993. He was one of the first W0 stations to achieve 5BWAZ and was one of the best low band Dxer's of the 1980's.*

Conditions were not as good to the West Coast of the U.S., as that short but good peak to the Midwest, but the West Coast opening was of a longer duration. I worked my friends at Rainbow Ridge the first weekend with Darrell, N6DX peaking at 5x6. I was mildly disappointed as I expected something more remarkable from this location. Rainbow Ridge is at 3,000 feet above sea level overlooking the Pacific Ocean. Their 2 element 80 meter rotary quad at 5x6 would translate to a 3x3 with the average W6 station. Dale, K6UA, in Orange County had been 5x9 at times and W6NLZ and W6OG were also solid copy. These four stations, and Ed, W6KUT were the class 80 meter stations of W6 land.

The best upper West Coast 80 meter signals were from W7FU and W6RR, with a goodly number of good signals 2 "S" units behind.

Again I noticed a substantial difference between the superior 80 meter stations and the rest of the crowd. This difference would sometimes be as much as 4 to 5 "S" units. I wanted to work everyone on the trip, so I hoped conditions would improve.

On the second and third days of the operation I began to experience more and more nagging equipment problems and was off the air a lot. I blew two boards in the Yaesu FT901DM and had intermittent receiver problems, difficulty in loading on a particular band and no RF output. It is theorized that I had experienced damage due to a power surge, although the whole station was operated through a large hypersil transformer made by Peter Dahl that matched the 180-260 volt line voltage to the transceiver' 230 volts.

On the third day I experienced a monsoon. The Hy-Gain TH-2 came down, but was resurrected the following day. I spent two hours in the rain holding on to the 80 meter vertical. It was bent a lot by the wind, but survived.

Romesh, 8Q7AZ was the 17 year old son of Noel 8Q7AV. He was a brilliant student and a 40 meter DXer. At the time they were the only resident amateurs in the Maldives. They live on the main island, Male, which is terribly crowded and where the bulk of the population resides. They have enough space for a 40 meter inverted vee and a Hy-Gain TH-3 tri-band yagi. They operate barefoot, primarily because their line voltage is at 160 volts between 5:00 and 10:00 pm. An amplifier might overload the transformer on the power pole by their house.

I loaned him a random wire tuner to listen to some of the 80 meter activity, but much of the time he had no electrical service at his QTH. The three of us, the entire ham population of the Maldives, gathered together one day for a picnic and exchanged stories about DXing.

The next to last day of my stay in 8Q7 was marred by the Dentron MLA-2500 amplifier blowing up, plunging the entire hotel into darkness for about 30 minutes. I had also hot-switched the Dentron MT-3000 tuner, by turning the band selector switch with full power applied. This was by far my biggest error of the trip. The fatigue of operating for 24 straight hours had finally caught up to me!

My next problem in departing the Maldives to go to Djibouti was the three plane changes that had to be accomplished with precision so that I could operate in the CQWWCW Contest from J28. A missed flight would set me back two full weeks. I got the 400 pounds air freight coordinated with my flight and arrived in Djibouti at 2:00 am on Monday morning. This provided me with five days to prepare for the DX Contest.

I was disappointed that I had to leave the Maldives, as I felt there was more DXing to get done from that location.

The Seychelles Visit - On my way to Djibouti, I stayed a few days on the Seychelles. Seychelles is the other island paradise and it is distinctly different than the Maldives. More lush, more mountainous, more humid with a Socialist form of government. As far as I could tell, there were only three active amateurs on the island who had managed to hold on to their calls. Bill, S79WHW, an energetic friendly 79-year-old, originally from New York. Bob (Major Carragher) S79MC, ex-MP4BCC and Ray, S79RD, at the tracking station, whom I did not meet.

Customs made me leave the radios at the airport, but I didn't care because I only had three days before the flight to Djibouti. I went to Beau Village to see Bob, a bachelor, who has the best amateur station in S79, and Bill who lives with six beautiful girls; his wife's by a former marriage. This island paradise had some of the most beautiful people I had seen on the whole trip. Bob was kind enough to let me operate from S79MC on 10 meters.

The Djibouti Operation - I was met by Pierre, J28AZ, in Djibouti. Pierre is a fervent DXer of the 20 meter variety, who has worn a groove in 14.106 kz. talking primarily to the French community of nations. As he told me, "There are so many American stations...". While in the Maldives, Pierre had asked me if I wanted to operate 40/80 meters on the Abu Ail DXpedition. I had agreed, but when he met me at the airport his first words were, "You cannot go. I am sorry. K6LPL has telephoned me and said anyone but not N2KK." Instead a TU2 amateur made the trip. Today this whole story is still a mystery.

Hassan, J28AA, who is the Minister of Telecommunications, was in Geneva when I arrived, but had left a license for me, J20CN. I was a little bit disappointed, as I wanted a J20KK callsign. I had two choices, wait for his return or operate. I chose to operate.

My site selection was the La Siesta Hotel, on a long narrow peninsula surrounded by the Red Sea on three sides, five stories high and about sixty feet from the sea. I bought another mast for the Hy-Gain TH-2, put the vertical up with it's fourteen radials on the roof that had metal reinforcement.

Andre Thibault, J28BJ, kindly repaired the MLA-2500 amplifier and brought it to me on the second day of the CQWWDX Contest early on Sunday morning. My QTH was three miles from the Somali frontier, a very sensitive area. I had the assistant director of the Telecommunications department come to the hotel and tell the owner, who is a native Somali, that it was okay to put up the antennas. Everyone there was afraid to do anything on their own. When I finished laying all the 80 meter radials on the roof it was growing dark; 6:30 pm local time and 1430 UTC.

I was still barefoot at the time, as Andre, J28AA, would arrive later. I turned on the radio and heard a very familiar voice on 80 meters, Pete Dalton, W6NLZ, who was 30 db over 9.

I said, "Hey Pete," and he said, "Yeah?". I responded with, "It's David." He said, "Hi David, where in the world are you?"

He gave me a 5x9 report. I could not believe what I was hearing. I didn't have this kind of propagation from the Maldives to California and now I am 2,000 miles further west. What's going on? I was obviously right on the greyline; I had a pipeline to the West Coast, my sunset was 1433 UTC. Southern California sunrise was around 1455 UTC and Northern California about 1530 UTC. I worked W7's and some VE7's until 1600 UTC.

Paul, VS6DO, who normally hears well could never hear me that well, but I rag-chewed with stations on 80 meters that Herick, FRØFLO, could simply not hear. Just the right spot at the right time phenomena, with a good antenna.

On the second morning, Steve, AA6AA, interrupted Clint, W6OG, and said, "Well he's not very strong with me, I don't know if I can make it." I thought, come on Steve, give me the numbers, I hear you! I was still barefoot. A few minutes later he gave me a 3x4 report and I gave him a 5x7, for his 200th Zone for 5 Band WAZ. W6GO and W6TSQ both gave me 4x4 reports. They were surprised that I gave them both 5x9 signal reports, but I could literally hear a pin drop during that 80 meter opening.

Later on a good day, with the MLA-2500 amplifier, Sam, W6TSQ, gave me a 5x7 report which was more satisfying. I was able to hear W6 and W7 everyday. The longpath was very dependable at that time; actually more dependable than the shortpath opening to the East Coast. I finally ended up with 89, W6 an W7 contacts on 80 meters, with 2 KL7 stations being my longest longpath contacts.

The QRM on shortpath at 0100 - 0400 UTC was intense, but I had some mornings when I worked over 100 U.S. stations on 75 meter SSB. At sunrise I was always trying to see how far west I could get. I managed short path contacts with KØZZ and WØSD in South Dakota and finished with 20 WØ stations in the log. The W5 stations were even easier, since they were so much farther south.

While in Djibouti, I also had the pleasure of UM8 and UJ8 emcees on 3640 kz rounding up the U.S.S.R. stations for me. They are very eager to work DX on 80 meters. Constantine, UI8ZAC has a Delta Loop on 80 meters and only works the 80 and 10 meter bands. Willy, UA9CBO, is a great operator who knows the band well. He had one of the more outstanding Asian signals.

One morning, J20/A from Abu Ail showed up on 80 meters, but he was inaudible on the East Coast. I was 5x9 into the East Coast at the time. Oh well...off to Yemen.

A Look At Yemen - I departed Djibouti and headed for Yemen. I had heard in Djibouti how wild it was there and I had a nagging fear that there was a possibility of losing my equipment there, but I was determined to give it a go. The plane landed in South Yemen first and we had some time to look around. The airfield was lined with Mig aircraft, dozens of them, and none of the local people would speak to you, except the Russians and the customs staff.

When I finally arrived in Sana's, I was amazed to see a 13th Century, whitewashed medieval town, filled with tall white spires, surrounded by high craggy peaks at a 7,000 foot altitude. As usual, I was the last one off the plane. I noticed that all thirteen pieces of baggage that were sitting at the baggage claim belonged to me.

I noticed that all of the soldiers and non-uniformed customs men were watching me.They waited silently until I approached them. Finally a short man with a sword at his waist said, "Hello, I am Mustafa." He was one of the customs supervisors. The custom's people were polite, but the soldiers were not and they crowded around as Mustafa, very friendly, shook my hand vigorously, explaining that I must have one of the ministries call because they could not clear the radio equipment without permission.

I took my camera gear and clothing and headed for Sana's. Every man in sight wore a rifle or machine gun over his shoulder, a sword and a dagger at his waist and often a pistol as well. The swords were long and curved, usually with jewel-encrusted handles.

The women were covered from head to toe, usually dressed in black, with only hands and feet showing; eyes covered by a translucent cloth. I was told to nit photograph the women.

My taxi was a Mercedes Benz; the driver also had a machine gun and a sword. He took me to the Alhamed Palace Hotel, the palace of the last king of Yemen, who was overthrown in 1962. It was six stories high, much higher than any structure around. My new head cold, picked up in the heat of Djibouti, was now bothering me more in the higher and colder climate.

The first thing the next morning, I headed for the Telecommunications building to see Mr. Al-Ainsi, the Minister of Communications, whose name Mustafa had given me. The driver in the Mercedes Benz was waiting for me; he was very helpful. None of the doorways were marked, so it took a half an hour or so to find the right area for Mr. Al-Ainsi. There were the usual armed guards outside of his door, the Arabic version of the Cosa Nostra.

I waited in a center room for half an hour while being given some fine Yemeni coffee. I was the only non-Yemini person visible in the building. When I did finally have the chance to ask Mr. Al-Ainsi for the amateur radio license, he was friendly but perplexed, "We don't have it here." was his reply. I told him that I was here to do photographs for travel and tourism and that all of my equipment was stuck at the airport. This understood,he called the airport and released everything immediately and brought Mr. Adadi, who is head of the frequency management office and who actually allocates frequencies for all radio and telecommunications services in Yemen.

Mr. Adadi showed me all of the requests received, perhaps one-hundred in all and stated that while they were not against amateur radio, it just as yet had not been provided for in the overall scheme of things.. Further, it was under consideration of the President of Yemen and some decision was going to be made sometime. Obviously, I was disappointed as I desperately wanted to get on the air.

After an early lunch with both of these gentlemen I collected everything from the airport, set up the vertical on the hotel and heard some signals coming through from the U.S. The next day I saw Mr, Al-Ainsi and Mr. Adadi again and also met the Minister of Information. Mr. Adadi asked with a smile, "Are you using your radio"? I then realized that while they would not give me a license that they expected me to operate! No paperwork but no trouble. I was really in a quandary. What should I do now? As I drove back to the hotel I first decided to operate, then not to operate a half a dozen times. The final; resolution came to me when I visualized the ARRL not accepting my operation, as I was sure would happen, and then having 10,000 DXer's angry at me.

I settled for taking some pictures of one of the most fascinating places I have ever seen.

The day before I left I met with the Minister of Information again and chatted with him briefly at the Telecommunications Ministry. A month later, after arriving in Paris, I saw a one-paragraph story on page 5 of the *Paris Herald Tribune*: "Yemeni Minister Assassinated." It mentioned that his car had been attacked just outside Sana's and was literally filled with bullet holes. One of my personal contacts had been murdered.

Coincidentally, during my first week back I read a story in the Los

Angeles Times regarding the release of two American prisoners from a Yemini prison that had been tortured. I had been there with radio transmitters and cameras and had been treated well. I have no explanation for this.

The flight leaving Sana's for Khartoum was eight hours late, but I needed this gave me the opportunity to organize my air freight and get it on the plane. It took three taxis to get all of the equipment to the airport and as always it created quite a stir. It was difficult to go unnoticed anyway as I didn't see many Westerners in Yemen.

The Sudan Operation - I arrived in Khartoum at 11:00 pm local time with the Yaesu FT-901DM in one hand and the Dentron MLA-2500 in the other. Everyone was too sleepy to give me any trouble, but I did have an anxious moment when customs indicated that they might take away my transceiver. I explained that I needed to listen to the BBC broadcast every night so they waved me through. I stepped over the many people that were sleeping on the airport floor and hailed a taxi. I was ecstatic, because at last I would be able to operate again from Zone 34.

The next morning I sought out Gunther, DF3NZ/ST2, at his office on the River Nile at the River Transport Corporation. Gunther and I had dinner that evening and talked of amateur radio for a long time. Steve, DJ1US/ST3, had just closed down from Wad Medani about 100 miles from Khartoum and was leaving the Sudan. Steve was mostly a CW operator, and also did some low band work on 40 and 80 meters. Peter, DK5BD/ST2, was active on 10-15-20 meters with a tri-band yagi and also RTTY. Gunther had just gotten his shortened vertical going on 40 meters, with good results into Europe. My concept of working the U.S. on 80 meters seemed impossible to him.

6U0KK

Gunther had arranged for me to meet Dr. Sid, the unofficial ambassador of amateur radio in the Sudan. Dr Sid, like everyone else in the Sudan, is unlicensed. There has never been an amateur radio license issued in the Sudan. The government is well aware it exists and tolerates the hobby, but it does not issue licenses. Dr. Sid has fought for twenty-five years to change this situation, but it is difficult because they fear the radio there, associating it with troop movements and coup de'etats. Three times in those twenty-five years, Dr. Sid's equipment has been taken from him.

My radios were in place, the antennas up, all the air freight cleared through customs. On my second evening in the Sudan, I went to a meeting at the youth palace, about ten miles northwest of Khartoum, the home of 6T1YP.

Gunther had advised me that after I met Dr. Sid and obtained his blessing. I could open up and start operating. Present at the meeting were Dr. Sid, Gunther, Peter, Fadul, and I. Fadul, ST2FF, was the, "Manager of Technical Services", as it was explained to me. In Fadul's office is only an FT-7B with the TH6DXX on the roof of the six-story youth palace. This was the station put up in June of 1980 by Martii, OH2BH. It was soon evident that Fadul knew little or nothing about amateur radio.

Dr. Sid chaired the meeting and asked me, "What are you prepared to do for amateur radio in this country?" He wanted three or four subscriptions for radio magazines, which I gladly volunteered to send and Dr. Sid said, "Good, you can operate." A German fellow was discussed at the meeting, who was a technical instructor, but who was not attending the informal monthly meetings and not contributing the one-day-a-week mandatory contribution of time to the youth palace. Dr, Sid said, "tell him to contribute one-day=a-week to the youth palace or we will take him off the air!"

After the meeting, we were introduced to a class of about twenty youths who were learning Morse code. I operated for half an hour from the club station, 6T1YP, until they all wanted to lock the place up and go home.

During my stay in the Sudan, Dr. Sid, Marty and Frosty were angry and nervous because of the "OH2BH problem". Marty had been in Omdurman at 6T1YP using Fadul's callsign, ST2FF/ST0, in the south. Operating from the Juba Hotel he made 4,000 QSO's in four days. Although he had been kind enough to put up the beam at the club station, he had put a picture of a starving child on the face of his QSL card. This card reminded me of Biafra.

There are conservatively estimated, several hundred U.N. personnel in the Sudan working diligently various good will projects. What was worse was the political commentary on the reverse side of Martii's QSL alluding to the valiant efforts of the people of the South in their struggle against the dictatorship to the North. There is further comment about disease, malnutrition and starvation in the South.

Dr. Sid said, "If the government here ever sees this QSL card, we are all in jail and no amateur radio will exist here for twenty years." Gunther and Peter agreed emphatically. The North and South have a tenuous, fragile peace after a bloody, 17-year civil war.

The President of the Sudan, General Numeiri, has great popularity amongst the people and the Sudan is moving slowly towards the legalization of amateur radio.

During my stay in Khartoum, oil had been discovered in the South. The Parliament adjusted the border between the North and South so that the oil fields was in the North. This certainly created more murmuring and unrest in the South.

Gunther wrote a letter to Marty, OH2BH, asking him not to publish any more stories of starvation or political commentary, rightly or wrongly, because it puts the Sudanese amateur in a very sensitive position. He received no response to his letter.

The next afternoon I operated on the 10 meter band from Dr. Sid's ham shack, working about 500 U.S. stations. That evening, from my little hut at the Green Village Hotel, I started my 80 meter activity. The first session yielded about 300, 80 meter QSO's, 66 with JA, 75 U.S. and many European stations. Longpath was much more difficult because I was 400 miles west of the greyline. The initial longpath catches were N6ZV, N6DX, AA6AA, K6SSS, W6OG, W6TSQ and a few others. These contacts were all much more difficult than my operation from J20CN in Djibouti. Now, instead of the greyline pipeline, the signals were all at or near the noise level. To me, the greyline is a tunnel straight to your destination at the other end, no matter how immense the distance is between the two stations.

After four days on the air from Khartoum I was ready to try an operation from Southern Sudan. On Sunday morning I went to Sudan Airways to get my air-freight moved down to Juba with me on Monday morning, only to discover that Sudan Airways was four months behind in their shipments. There were piles of perishable foodstuffs for U.N. projects just sitting in the ramshackle "terminal".

Furthermore, since no over-weight allowance was permitted on the already full flight, how in the world would I get 400 pounds on board, in addition to my 120 pounds of carry-on baggage.

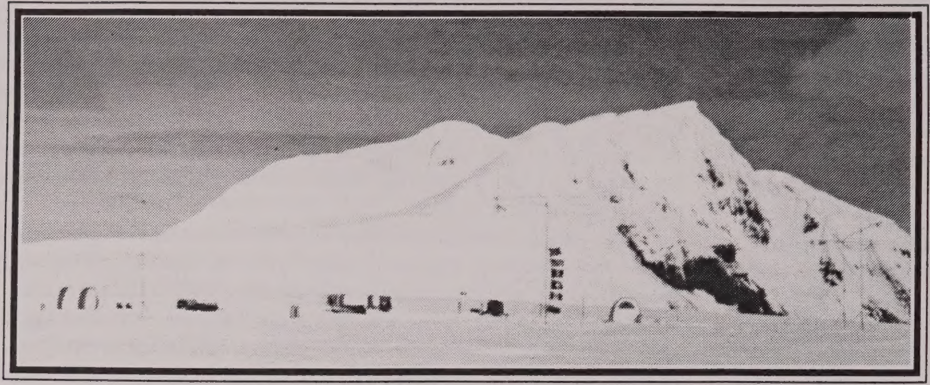
I put the hypersil transformer in my suitcase, eliminated all extra clothing and left as much of the gear as possible back at the hotel.

At the airport I said, "Embassy business - life or death", with a straight face. Somehow, everything was put on the airplane for a nominal fee and I was on my way to Southern Sudan, ST0.

Next month the Low Band Monitor will conclude this Dxpedition story with more low band operation from Zone 34. All of the 80 meter log entries from N0KK/ST2 will also be printed for a look back at this very exciting operation.

3Y0PI 160 Meter Details

Blizzard Takes Out Battle Creek Special - K9AY Antenna Plays - by K0IR



3Y0PI ANTENNA SITE - (L to R) - 3 El 15meter yagi above WARC yagi, 3 El Tribander, K9AY 75-80-160 meters, 3 El 20 meter yagi, 2 El 40 meter. Not shown are second Tribander and Battle Creek Special are at far left. Photo: K0IR

3437 Granite View Rd.
St. Cloud, MN 56301
U.S.A.
Mar. 21, 1994

Dear Lance,

Thank you very much for the copy of The Low Band Monitor, your letter, and the copy of the spots from N8BJQ. It was great to recieve them.

The 3Y0PI logs are all in the possession of the QSL managers, AA6BB and KA6V. They may be willing to give you the low band data. The 160 data should be relatively easy to extract or copy.

I can give you a little insight into the events leading the the dominance of SSB operation on 160 meters.

I began the 160 meter operation on Feb. 4 using CW. W0CD was the first 160 meter contact from 3Y0PI at 0507 that day. The opening was brief but dramatic. There was also a dramatic blizzard later that day which brought down the Battle Creek Special which was wired to the CW tent. The Battle Creek could not be raised for several days due to high winds, then, when it was repaired and raised, it would not load on 160. There had to be a problem with the 160 loading wire. The antenna was lowered, a fracture in the loading wire confirmed and repaired, and the antenna re-erected a day later.

During the time the Battle Creek was down, the only other 160 antenna was wired to the SSB tent. Since we were alternating SSB and CW nights on the other low bands, I took my key and keyer to the SSB tent when it could be coordinated with other operations in that tent. However, on the few occassions this was possible, the conditions on 160 were poor. Conversely, on 160 SSB nights, conditions happened to be better.

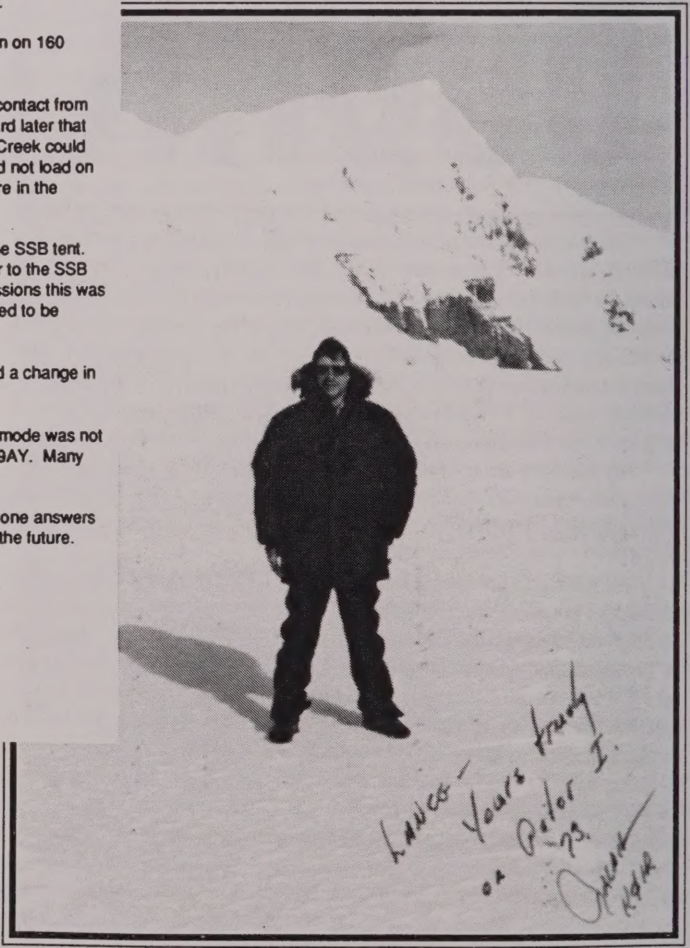
Hence, despite our plans to run 50% CW and 50% SSB on 160, mother nature effected a change in our plans resulting in more SSB activity than CW activity.

We were fortunate, however, to have two low band antennas so that if one antenna or mode was not available, the other was. The other low band antenna we utilized was a vertical designed by K9AY. Many lowband enthusiasts owe their 9G1XA contact to this antenna.

There are many stories like this to be told concerning the 3Y0PI operation. I hope this one answers some of the "whys?" and that I have the opportunity to share other stories with your readers in the future.

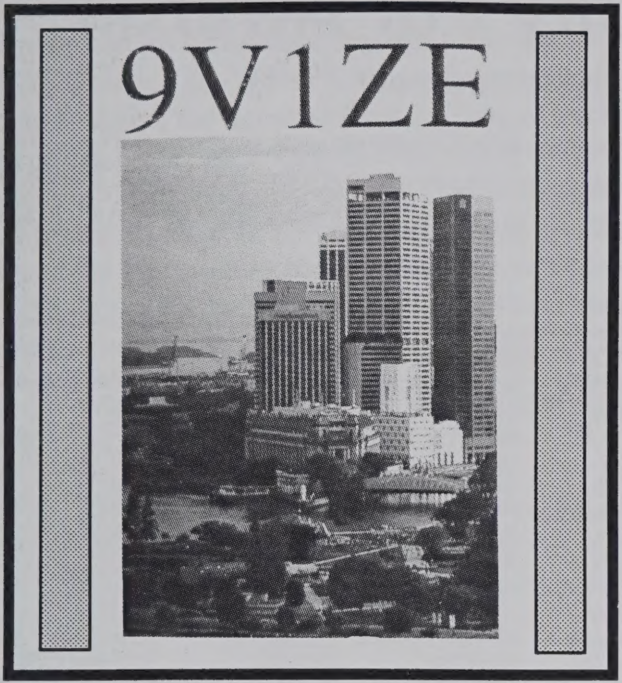
73,

Ralph Fedor - K0IR

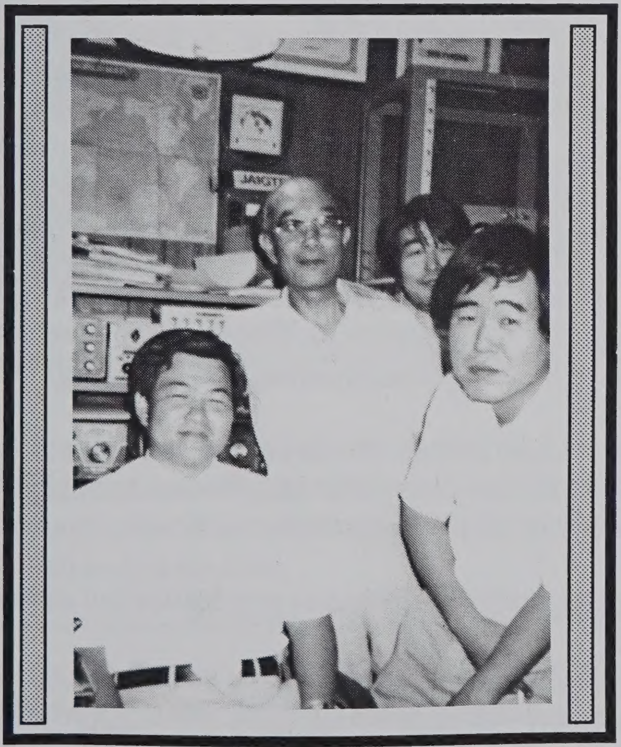


K0IR AT 3Y0PI - Ralph Fedor, K0IR, is shown on Peter I. He made many of the 160 meter contacts during the DXpedition. Photo: K0IR

LOW BAND POTPOURRI - BY K0CS



REPORT FROM SINGAPORE - Gus, 9V1ZE, says the highlight of his low band season was working W1ZE at 2300Z on 160 meters. The contact was made on December 17, 1993.His antenna was an inverted vee at 70 feet. He has had good luck with the Timewave DSP-9. TNX: K4SXT



WESTERN MALAYSIA - One of the great prizes for any low band DXer 9M2AX. From left to right: 9M2AX, JA1GTF, JA1CHN, and JF1NZW. TNX: N4JJ

REAL DX - Here's the shack of RV0YF, ex-UA0YT who has been active since 1965. He gave many stations an 80 meter contact from Zone 23. TNX: N4JJ

ARRL DX PHONE - Glenn, WA0PUJ, went to Little Cayman for the ARRL Phone Contest. His Single Op. Score was: 6,545 - 342 - 6,715,170. He had 303 - 160 meter QSO's TNX: WA0PUJ

SPOT OF THE MONTH CLUB WINNERS FOR FEBRUARY

WIN AN EXTRA MONTH'S SUBSCRIPTION

W8UVZ
TL8NG - 1.836 - 0440Z - 7 MAR
N4JJ
5R8DG - 3.506 - 0247Z - 19 MAR
W1WAI
ST0/PA3CXC - 7.005 - 2240Z - 24 MAR

SEND YOUR SPOTS TO:

LOW BAND MONITOR
P.O. Box 1047
Elizabeth, CO 80107
(303) 646-4630

More Stations Qualify For Awards

KX4R, N4JJ, K6SSS and W8UVZ Lead March Achievers

160 Meters - As the poor conditions during the last two months would indicate; our Worked All Continents Award has bogged down at twenty-four entrants. This will help us establish a benchmark for next season that should easily be achieved. Most 160 meter stations west of the Mississippi River can no longer work Europe or Africa, since the favorable conditions seen in late January.

160 METER WORKED ALL CONTINENTS 1993-94

NO.	CALL	DATE	AFRICA	ASIA	EUROPE	N. AMER.	OCEANIA	S. AMER.
1	KY0A	11-17-93	6W6JX	JA1CGM	JW5NM	VE3BW	VK6ACY	P40W
2	W8UVZ	11-20-93	ZD8Z	JA1CGM	UB5ZAL	KL7Y	VK4YB	PY0FF
3	K3ND	11-27-93	EA9EO	4X/S59PR	ZB2X	VP5RX	KH6CC	P40W
4	AA6TT	11-27-93	EA8BR	JH1RES	TM7C	VP5L	3D2OH	9Y4H
5	W8AH	11-30-93	EA9EO	4X4NJ	YO3APJ	FM5BH	KH6XT	9Y4H
6	W0CD	11-30-93	ZD8Z	JF1NZW	G3SZA	FJ/F6HWU	3D2AW	P40W
7	K0CS	12-03-93	6W6JX	4X4NJ	PA0HIP	V31DX	KH6CC	9Y4H
8	GW3YDX	11-27-93	VQ9QM	RA9FBT	GU2FRO	WA3EUL	ZL2JR	P40W
9	AB0X	12-23-93	ZD8Z	JA1CGM	DK6WL	K5NW	KH6AT	9Y4H
10	W8JGU	12-15-93	ZD8VJ	JA3ONB	4K2MAL	WA4DRU/VP5	VK6ACY	9Y4H
11	K9FD	12-26-93	9G1XA	JA3ONB	UB5ZAL	HH2PK	VK5BC	WS4E/YV5
12	N5WA	12-27-93	EA8PP	JA6HUG	G3PQA	V47KP	KH6CC	9Y4H
13	WB9GYU	01-06-94	ZS6EZ	JA1CGM	JW5NM	HR2IQC	VK6HD	9Y4H
14	W0ZV	11-27-93	5N0MVE	4X4NJ	Z30M	TI1C	KH6CC	9Y4H
15	K4ODL	11-18-93	ZD8Z	JA1HQT	GI0KOW	KL7Y	VK6ACY	P40W
16	NI6T	12-20-93	ZD8Z	JA7OEM	G3RBP	VY1JA	3D2OH	P40W
17	N4KG	01-13-94	EA8PP	JA1CGM	S59UN	K9BG/VP5	FK8CP	4K1F
18	NX0I	12-25-93	ZD8Z	JA7BXS	IV3PRK	YS1X	V7X	HC0E
19	K4IBP	01-30-94	6W6JX	JA1HQT	ON6ACG	KF7S/KL7	KH6U	9Y4H
20	WB9Z	11-27-93	ZD8Z	S59PR/4X	UC2WAF	TI1C	KH6AT	P40W
21	K4KUZ	02-11-94	C52ZP	4X4NJ	OT4T	VP9AD	KH6CC	P40O
22	K4SB	11-27-93	EA9EO	4X4NJ	SM5EDX	FJ/F8UFT	VK3AJJ	PY1BVY
23	KX4R	11-28-93	EA9EO	4X4NJ	LY7A	V47KP	KH6AT	PJ2/WJ2O
24	N4JJ	11-28-93	EA8EA	JA7OEM	G3LNS	NL7G	VK6HD	8R1K

Two more "Top Band" Enthusiasts were kind enough to send in their 160 meter Worked All Continents band data for this month.

Greg, KX4R,#23, sent in another CQWWCW Contest effort that was achieved in less than 24 hours. He accomplished the feat in 20 hours and 55 minutes from a city lot, using a 75 foot shunt fed tower and fifty radials. He has worked 114 countries since 1992 with this system.

Jack, N4JJ, #24, one of South Carolina's finest, also did the deed during the CQWWCW Contest and in 11 hours and 32 minutes. Jack is one of the few amateurs in the world with over 200 countries confirmed on "Top Band", with a 228 total. He uses a 108 foot shunt fed tower and three miles of buried radials. We are honored to add his call to our first 160 meter list.

There Is Still Time - April 15, 1994 is the deadline for all of our awards. The 160 meter Award is available to anyone who has worked the six different continents of the world between September 15, 1994 and April 15, 1994. We would appreciate your entry for statistical purposes even if you are not interested in our absolutely amazing wallpaper. No QSL's are required, just your log data.

These entries will provide us all with an excellent barometer for worldwide 160 meter propagation and also show us who the most dominant DX stations are on each continent.

Carolina Dreaming - Bill Tippett, W0ZV, from North Carolina recently advised he had worked 101-160 meter band countries this season. Not to be outdone, Jack Jackson, N4JJ, of South Carolina, recently advised that he worked, 104 - 160 meter countries in calendar year 1993.

These statistics compare favorably with most Northeastern stations and these guys have better golf courses! Basketball is also great out there. Anyone want to live in Colorado? I have an affordable bungalow in Elbert County!

80 Meters - Thank you Tom Russell,N4KG, who contributed a #7 entry! Someone finally broke the string of California entries! Fred Caposella, K6SSS, came up with #6, which gave the folks from W6 land four straight entries in a row! The 80 meter band is tough from California. These DXers were starting to make it look easy!

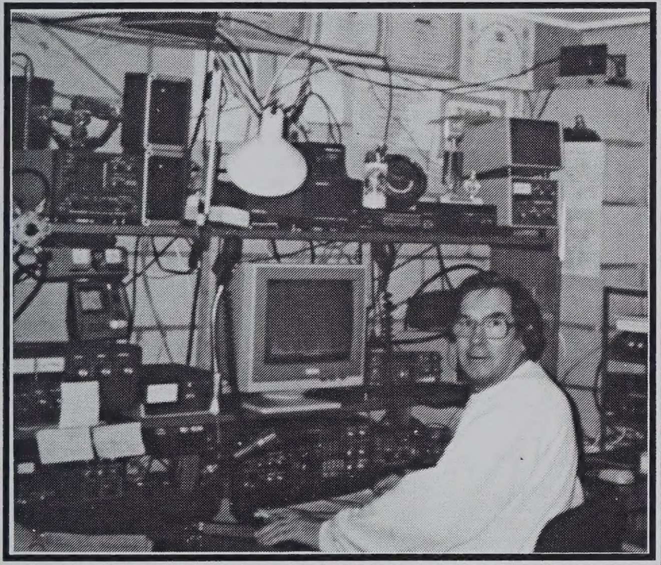
The George Taft, W8UVZ, #8 entry was awsome. During the CQWWDX Contest he worked 34 Zones and 105 countries during the weekend from the state of Michigan. One of his neighbors worked HS0AC on 80 meters, that George missed, or he would have had a nice 35 Zones and 106 countries. What would he have done from a good DX location like Savannah or Charlotte? It boggles the mind!

Richard, ex-WB6JPY, now AB6ZV, upped his seasonal 80 meter total to 148 countries. He has a good chance to break the 150 country barrier before the season ends.

The CQ WPX had surprisingly good conditions in March. If this contest put your 80 meter total over 100 countries for the September 15, 1993 to April 15, 1994 season please send in the data.

80 METER WORKED 100 COUNTRIES 1993-94

NO.	CALL	DATE	COUNTRY	STATE	SUBMITTED	LATEST
1	**W8AH**	11-26-93	USA	WEST VIRGINIA	108	108
2	**K9FD**	12-30-93	USA	ILLINOIS	106	106
3	**NI6T**	12-20-93	USA	CALIFORNIA	119	119
4	**N2KK**	12-05-93	USA	CALIFORNIA	106	106
5	**WB6JPY**	02-03-94	USA	CALIFORNIA	107	148
6	**K6SSS**	02-09-94	USA	CALIFORNIA	126	126
7	**N4KG**	03-01-94	USA	ALABAMA	120	120
8	**W8UVZ**	11-28-93	USA	MICHIGAN	105	105



This is Kerry Viney, VK4MZ, of Queensland Australia. The Second 40 meter qualifier this season. Look for him on 80 and 160 meters during the next few months.

Why is this man smiling? This is Jack Jackson, N4JJ, of Florence, South Carolina. He has 308 confirmed on 80 meters and 228 on 160 meters. Your new neighbor?

40 Meters - We had no new entries for this one. One hundred and fifty countries in this band is a lot more of a challenge than most people expect. We are pleased to have four operators reach this level during our first *Low Band Monitor* Season. This band has provided many Low Band Dxers a nice diversion this season, particularly when 80 and 160 meters are flat.

40 METER WORKED 150 COUNTRIES 1993-94

NO.	CALL	DATE	COUNTRY	STATE	SUBMITTED	LATEST
1	**W8AH**	11-26-93	USA	WEST VIRGINIA	157	157
2	**VK4MZ**	01-13-94	AUSTRALIA	QUEENSLAND	166	166
3	**N4KG**	11-30-93	USA	ALABAMA	172	172
4	**K9FD**	02-18-94	USA	ILLINOIS	151	151

LOW BAND MONITOR POWER SPOTS - MARCH 1994

TNX: N8HTT - W8TN - W8UVZ - K9FD - VK4MZ - WAØGFS - W8AH - NI6T - KØLW - K4KUZ - N4JJ - W1WAI

40 METERS

7023.0	T33KK	1-April-1994	0613Z
7007.0	SU2MT	1-April-1994	0605Z
7060.0	BV2AF	27-Mar-1994	0411Z
7008.8	VK2PA	25-Mar-1994	1114Z
7001.0	ZF2WH	25-Mar-1994	1102Z
7002.2	JA2NOX	25-Mar-1994	0938Z
7010.0	VE9AA	25-Mar-1994	0550Z
7010.2	TJ0SSE	25-Mar-1994	0540Z
7000.5	8R1/N4VA	25-Mar-1994	0528Z
7011.4	CO1FL	25-Mar-1994	0510Z
7004.1	HB9AHA	25-Mar-1994	0513Z
7001.5	SV0HS	25-Mar-1994	0500Z
7020.0	XE1GTD	25-Mar-1994	0450Z
7001.8	3DA0CA	25-Mar-1994	0423Z
7006.3	ZF1CQ	25-Mar-1994	0409Z
7002.4	UT2UB	25-Mar-1994	0415Z
7014.0	C6AFN	25-Mar-1994	0325Z
7065.1	FS5PL	25-Mar-1994	0232Z
7000.5	ZF2WH	25-Mar-1994	0228Z
7013.5	HA5WA	25-Mar-1994	0228Z
7006.0	3B8CF	25-Mar-1994	0222Z
7010.4	LZ1QI	25-Mar-1994	0222Z
7003.0	IS0OMH	25-Mar-1994	0220Z
7004.0	SV1AKX	25-Mar-1994	0220Z
7006.0	YO6EZ	25-Mar-1994	0217Z
7008.0	PJ9JT	25-Mar-1994	0132Z
7008.9	OK1DXS	25-Mar-1994	0033Z
7005.0	ST0/PA3CXC	24-Mar-1994	2240Z
7051.9	OE1XTU	24-Mar-1994	2151Z
7043.5	9K2MU	24-Mar-1994	2151Z
7060.0	BV9P	24-Mar-1994	1452Z
7003.8	UA6LTI	24-Mar-1994	1435Z
7008.6	3B8CF	24-Mar-1994	1431Z
7004.0	BV7FC	24-Mar-1994	1433Z
7002.0	BV2TA	24-Mar-1994	1424Z
7004.0	VQ9SS	24-Mar-1994	1250Z
7005.0	P49V	24-Mar-1994	1218Z
7009.5	VS6/KJ4VH	24-Mar-1994	1135Z
7016.2	VK4KO	24-Mar-1994	1130Z
7008.5	VK6DX	24-Mar-1994	1102Z
7005.2	P49V	24-Mar-1994	1044Z
7002.9	ZL2CNE	24-Mar-1994	1020Z
7009.2	OA4AWE	24-Mar-1994	1009Z
7017.0	LU4FD	24-Mar-1994	1004Z
7001.9	FW/DK7PE	24-Mar-1994	0945Z
7005.7	ZL2DA	24-Mar-1994	0932Z
7015.0	8R1/N4VA	24-Mar-1994	0909Z
7013.2	S57AC	24-Mar-1994	0628Z
7026.0	6W1AE	24-Mar-1994	0612Z
7003.5	TI2KWN	24-Mar-1994	0601Z
7015.0	PY7SA	24-Mar-1994	0600Z
7006.2	SV1AOZ	24-Mar-1994	0531Z
7010.9	7P8SR	24-Mar-1994	0404Z
7004.2	HB9ATA	24-Mar-1994	0325Z
7057.0	PY0FM	24-Mar-1994	0313Z
7016.6	HC1JMN	24-Mar-1994	0254Z
7013.5	TI4SU/5	24-Mar-1994	0252Z
7009.5	IT9CKL	24-Mar-1994	0251Z
7008.2	RV3DEX	24-Mar-1994	0250Z
7006.9	3B8CF	24-Mar-1994	0246Z
7013.5	FS5PL	24-Mar-1994	0242Z
7004.7	T94IW	24-Mar-1994	0211Z
7003.3	SV1AKX	24-Mar-1994	0206Z
7009.1	VY2EA	24-Mar-1994	0205Z
7011.0	C6AFV	24-Mar-1994	0045Z
7006.1	ZA1J	24-Mar-1994	0045Z
7009.2	VU2JPT	24-Mar-1994	0035Z
7006.1	ZA1J	24-Mar-1994	0021Z
7007.4	TI4SU/5	24-Mar-1994	0013Z
7006.9	UX1HA	23-Mar-1994	2356Z
7007.0	T97T	23-Mar-1994	2333Z
7002.5	RK9KWI	23-Mar-1994	2318Z
7011.4	CO7EH	23-Mar-1994	2325Z
7025.9	EC1AFO	23-Mar-1994	2314Z
7010.6	VK6VZ	23-Mar-1994	2232Z
7004.3	ON5GL	23-Mar-1994	2230Z
7009.9	VK6DX	23-Mar-1994	1124Z
7002.6	FW/DK7PE	23-Mar-1994	1103Z

40 METERS

7008.0	ON8RD	23-Mar-1994	0721Z
7001.3	8R1/N4VA	23-Mar-1994	0613Z
7011.5	ZS6AY	23-Mar-1994	0519Z
7005.0	SV1HS	23-Mar-1994	0510Z
7005.4	EU7SA	23-Mar-1994	0414Z
7000.7	ZF2WH	23-Mar-1994	0350Z
7006.4	PZ1DV	23-Mar-1994	0331Z
7006.6	TA2DS	23-Mar-1994	0318Z
7015.4	DL8DD	23-Mar-1994	0322Z
7000.9	9A4FW	23-Mar-1994	0314Z
7001.7	ZF2WH	23-Mar-1994	0320Z
7007.6	T97M	23-Mar-1994	0309Z
7009.9	PZ1DV	23-Mar-1994	0313Z
7008.4	LU8DZJ	23-Mar-1994	0313Z
7003.0	ZF2WS	23-Mar-1994	0303Z
7008.4	UU3JO	23-Mar-1994	0257Z
7001.7	ZF2WH	23-Mar-1994	0308Z
7006.0	VO2GUY	23-Mar-1994	0258Z
7010.7	3B8FG	23-Mar-1994	0252Z
7010.0	EA2ACA	23-Mar-1994	0238Z
7004.4	SV1AKX	23-Mar-1994	0227Z
7003.0	9A4FW	23-Mar-1994	0217Z
7010.0	BV9P	23-Mar-1993	0214Z
7016.7	ZA1J	23-Mar-1994	0153Z
7001.9	EA8CN	23-Mar-1994	0128Z
7004.0	SV1AKX	23-Mar-1994	0128Z
7006.2	S51DQ	23-Mar-1994	0124Z
7004.3	T97T	23-Mar-1994	0033Z
7020.4	FS5PL	23-Mar-1994	0100Z
7025.3	ES1WN	23-Mar-1994	0014Z
7007.2	9I2Z	23-Mar-1994	0000Z
7005.2	ZS6MG	22-Mar-1994	2352Z
7016.5	YU7BCP	22-Mar-1994	2324Z
7006.9	9I2Z	22-Mar-1994	2324Z
7007.0	9I2Z	22-Mar-1994	2232Z
7057.7	7X2BK	22-Mar-1994	2219Z
7011.6	3Z0MTP	22-Mar-1994	2045Z
7007.9	C53HG	22-Mar-1994	2045Z
7059.9	UA3RAY	22-Mar-1994	2038Z
7004.7	BZ5HAN	22-Mar-1994	1532Z
7011.6	UA6LCN	22-Mar-1994	1514Z
7031.6	V31RA	22-Mar-1994	1512Z
7024.0	BV9P	22-Mar-1994	1445Z
7060.1	HL1LLF	22-Mar-1994	1434Z
7007.8	3B8CF	22-Mar-1994	1438Z
7004.0	VQ9SS	22-Mar-1994	1412Z
7008.3	3B8CF	22-Mar-1994	1413Z
7007.6	UT3MA	22-Mar-1994	1405Z
7060.0	BV9P	22-Mar-1994	1349Z
7063.0	V63SD	22-Mar-1994	1310Z
7007.6	VS6/KJ4VH	22-Mar-1994	1149Z
7002.0	CO2MA	22-Mar-1994	0737Z
7008.6	EA7HAT	22-Mar-1994	0623Z
7005.0	G4BUE	22-Mar-1994	0622Z
7001.5	P49V	22-Mar-1994	0616Z
7001.4	P40V	22-Mar-1994	0611Z
7005.2	4X4JU	22-Mar-1994	0444Z
7001.0	P49V	22-Mar-1994	0413Z
7082.8	YS1YWT	22-Mar-1994	0356Z
7002.7	9A2HH	22-Mar-1994	0322Z
7010.5	EA8ADJ	22-Mar-1994	0313Z
7007.4	3B8CF	22-Mar-1994	0311Z
7000.3	ZF2WH	22-Mar-1994	0229Z
7009.3	TI4SU/5	22-Mar-1994	0228Z
7005.2	RK9LWO	22-Mar-1994	0218Z
7008.3	UN9LM	22-Mar-1994	0214Z
7007.6	3B8CF	22-Mar-1994	0220Z
7002.0	VU2JPT	22-Mar-1994	0219Z
7008.0	PJ9JT	22-Mar-1994	0149Z
7002.2	VU2JPT	22-Mar-1994	0142Z
7010.4	TI4SU/5	22-Mar-1994	0143Z
7003.0	IS0OMH	22-Mar-1994	0145Z
7000.9	VU2JPT	22-Mar-1994	0122Z
7005.0	SV1AKX	22-Mar-1994	0057Z
7005.8	SV1AYU	22-Mar-1994	0047Z
7004.3	IS0OMH	22-Mar-1994	0054Z
7008.2	EA9UG	22-Mar-1994	0046Z
7005.0	VU2JPT	22-Mar-1994	0023Z

40 METERS

7015.0	9H1DV	22-Mar-1994	0022Z
7001.5	Z31GB	22-Mar-1994	0006Z
7005.8	ZA1JP	22-Mar-1994	0009Z
7019.9	VU2JPT	22-Mar-1994	0004Z
7005.0	ZA1J	21-Mar-1994	2331Z
7017.5	VK3APN	21-Mar-1994	1125Z
7004.0	HC5AI	21-Mar-1994	1119Z
7008.0	JA7BXS	21-Mar-1994	1019Z
7004.0	ZL2AGY	21-Mar-1994	1011Z
7007.4	HJ0VGX	21-Mar-1994	0335Z
7001.2	ZF2WH	21-Mar-1994	0329Z
7013.5	N6OOE/HR	21-Mar-1994	0318Z
7004.6	4Z4DX	21-Mar-1994	0318Z
7004.2	4O4GNO	21-Mar-1994	0153Z
7006.9	9I2Z	21-Mar-1994	0135Z
7007.4	HJ0VGJ	21-Mar-1994	0313Z
7010.0	YO7LHA	21-Mar-1994	0312Z
7027.5	HA9RT	21-Mar-1994	0303Z
7004.5	4Z4DX	21-Mar-1994	0301Z
7028.5	HA9RT	21-Mar-1994	0259Z
7001.0	VO1IF	21-Mar-1994	0252Z
7006.2	S59A	21-Mar-1994	0246Z
7007.1	9I2Z	21-Mar-1994	0220Z
7018.0	PT7SY	21-Mar-1994	0233Z
7003.0	UR5EDX	21-Mar-1994	0231Z
7013.9	S51DQ	21-Mar-1994	0209Z
7013.0	FY5GJ	21-Mar-1994	0228Z
7007.5	HJ0VGJ	21-Mar-1994	0225Z
7004.6	4Z4DX	21-Mar-1994	0221Z
7011.8	HA9RT	21-Mar-1994	0217Z
7013.9	SH1DQ	21-Mar-1994	0208Z
7007.0	9I2Z	21-Mar-1994	0202Z
7011.0	Z31ET	21-Mar-1994	0138Z
7004.3	4O4GNO	21-Mar-1994	0157Z
7005.0	SV1AYU	21-Mar-1994	0157Z
7005.7	VU2XTO	21-Mar-1994	0152Z
7003.6	FG5FR	21-Mar-1994	0145Z
7006.7	VU2XTO	21-Mar-1994	0058Z
7007.0	9I2Z	21-Mar-1994	0134Z
7010.0	VU2JPT	21-Mar-1994	0049Z
7017.8	UT5PF	21-Mar-1994	0132Z
7010.0	VU2JTP	21-Mar-1994	0120Z
7005.0	VU2XTO	21-Mar-1994	0117Z
7025.0	ES1WN	21-Mar-1994	0114Z
7001.0	IS0OMH	21-Mar-1994	0056Z
7004.8	SV1AKX	21-Mar-1994	0110Z
7001.8	ER1AM	21-Mar-1994	0056Z
7016.7	EA9UG	21-Mar-1994	0047Z
7003.4	DL2JTE	21-Mar-1994	0045Z
7001.0	ZA1J	20-Mar-1994	2353Z
7006.0	CO2JD	21-Mar-1994	0042Z
7002.8	944NW	21-Mar-1994	0041Z
7002.0	ER1AM	21-Mar-1994	0037Z
7007.6	9A1CCJ	21-Mar-1994	0039Z
7002.8	9Y4NW	21-Mar-1994	0037Z
7007.6	9A1CCJ	21-Mar-1994	0037Z
7004.4	ZS6QU	21-Mar-1994	0030Z
7010.6	ES1WN	21-Mar-1994	0017Z
7002.5	S51OI	20-Mar-1994	2359Z
7008.5	OH0BBF	20-Mar-1994	2338Z
7013.7	ZS6BOF	20-Mar-1994	2258Z
7004.4	ZS6QU	20-Mar-1994	2321Z
7006.6	ZA1J	20-Mar-1994	2315Z
7038.9	G5LP	20-Mar-1994	2312Z
7015.1	VE9ST/NA14	20-Mar-1994	2249Z
7010.7	G0NYL	20-Mar-1994	2240Z
7002.6	DL2JTE	20-Mar-1994	2251Z
7005.8	ES1WN	20-Mar-1994	2234Z
7016.4	VP9MZ	20-Mar-1994	2228Z
7009.1	OD5/SM0THK	20-Mar-1994	2238Z
7002.4	T92A	20-Mar-1994	2234Z
7003.6	S50X	20-Mar-1994	2232Z
7002.9	TA3D	20-Mar-1994	2210Z
7004.4	ZS6QU	20-Mar-1994	2213Z
7010.5	EA8BYZ	20-Mar-1994	2213Z
7006.2	GI3OQR	20-Mar-1994	2205Z
7007.2	ZA1W	20-Mar-1994	2144Z
7005.9	EA9UG	20-Mar-1994	2137Z

LOW BAND MONITOR POWER SPOTS - MARCH 1994

TNX: N8HTT - W8TN - W8UVZ - K9FD - VK4MZ - WAØGFS - W8AH - NI6T - W1WAI - N4JJ

80 METERS

3500.0	VP8GAV	2-April-1994	0514Z
3785.0	5B4YY	2-April-1994	0335Z
3799.0	YO5ODE	2-April-1994	0333Z
3508.0	V85KX	1-April-1994	1256Z
3796.0	V73OR	1-April-1994	1218Z
3785.0	V63JC	1-April-1994	0910Z
3523.0	T33KK	1-April-1994	0730Z
3796.0	JD1BIE	30-Mar-1994	1245Z
3799.0	JH1ROW/TG	30-Mar-1994	1136Z
3501.0	HL9HH	30-Mar-1994	1123Z
3798.0	V73OR	30-Mar-1994	1055Z
3505.0	VP8GAV	30-Mar-1994	1050Z
3523.0	T33KK	30-Mar-1994	0751Z
3805.0	VS6WO	27-Mar-1994	1241Z
3507.0	EI2HI	25-Mar-1994	0625Z
3796.0	CT1ESO	26-Mar-1994	0629Z
3700.0	GM3TCY	25-Mar-1994	0615Z
3790.2	F6IIV	25-Mar-1994	0543Z
3777.6	DF9VH	25-Mar-1994	0540Z
3513.0	TI4SU/5	25-Mar-1994	0342Z
3799.8	K8UR/C6A	25-Mar-1994	0303Z
3789.5	HZ1AB	25-Mar-1994	0224Z
3795.0	HH2PK	25-Mar-1994	0113Z
3789.5	T97M	25-Mar-1994	0112Z
3510.0	PA3CXC/ST0	24-Mar-1994	2250Z
3800.0	CT3FT	24-Mar-1994	0739Z
3799.9	G3WMX	24-Mar-1994	0653Z
3799.9	G4AMN	24-Mar-1994	0640Z
3501.0	FW/DK7PE	24-Mar-1994	0629Z
3793.0	PY0FM	24-Mar-1994	0452Z
3511.9	ZS6NW	24-Mar-1994	0419Z
3793.0	PY0FM	24-Mar-1994	0400Z
3505.1	HP1XBH	24-Mar-1994	0303Z
3785.0	YV5EIL	24-Mar-1994	0247Z
3507.8	PJ9JT	24-Mar-1994	0232Z
3507.0	3B8CF	24-Mar-1994	0220Z
3506.3	OM3TDO	24-Mar-1994	0223Z
3799.9	EA3NY	24-Mar-1994	0012Z
3511.0	DL9GMM/5N0	23-Mar-1994	2359Z
3796.0	EA3JE	23-Mar-1994	2358Z
3511.0	S51LU	23-Mar-1994	2344Z
3999.3	C31SD	23-Mar-1994	2206Z
3799.4	VK6APZ	23-Mar-1994	2152Z
3507.0	9I2Z	23-Mar-1994	2102Z
3799.8	CT3FT	23-Mar-1994	0746Z
3799.8	VK4SJP	23-Mar-1994	0733Z
3790.0	HR2BDC	23-Mar-1994	0500Z
3796.0	XE1VIC	24-Mar-1994	0434Z
3792.5	HA3HV	23-Mar-1994	0421Z
3790.1	F5TBA	23-Mar-1994	0414Z
3506.9	HK7AAG	23-Mar-1994	0355Z
3791.0	J87BZ	23-Mar-1994	0314Z
3798.9	KP2AD	23-Mar-1994	0242Z
3512.2	ZS6NW	23-Mar-1994	0038Z
3513.0	ZS6AM	23-Mar-1994	0040Z
3505.9	OM3TDO	23-Mar-1994	0030Z
3793.5	V63SD	22-Mar-1994	1414Z
3796.1	CT1EKO	22-Mar-1994	0618Z
3795.0	P40V	22-Mar-1994	0550Z
3799.9	LX1SG	22-Mar-1994	0545Z
3790.0	IS0QDV	22-Mar-1994	0526Z
3795.0	HR2BDC	22-Mar-1994	0348Z
3788.6	EA9KQ	22-Mar-1994	0316Z
3501.3	SV0HS	22-Mar-1994	0129Z
3793.3	T94ON	22-Mar-1994	0127Z
3500.6	LX/PA3DCO	22-Mar-1994	0126Z
3509.9	OM3TDO	22-Mar-1994	0014Z
3508.0	KP4EJ	22-Mar-1994	0000Z
3511.0	US0SU	21-Mar-1994	2349Z
3791.6	GI0NWG	21-Mar-1994	2338Z
3508.0	FG5FR	21-Mar-1994	2321Z
3503.5	HK6KKK	21-Mar-1994	0355Z
3513.7	CO2VG	21-Mar-1994	0324Z
3511.3	TI4SU/5	21-Mar-1994	0320Z
3799.7	YU1FJK	21-Mar-1994	0301Z
3795.9	VP5/N4KE	21-Mar-1994	0251Z
3795.0	YV4AZF	21-Mar-1994	0218Z
3511.0	TI4SU/5	21-Mar-1994	0217Z

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3795.1	N4KE/VP5	21-Mar-1994	0219Z
3799.7	YU1AVQ	21-Mar-1994	0218Z
3505.1	LX/PA3FUE	21-Mar-1994	0213Z
3794.7	YV4AXF	21-Mar-1994	0129Z
3500.5	LX/PA3DCO	21-Mar-1994	0204Z
3508.0	RX6AOI	21-Mar-1994	0203Z
3794.7	YV4AZF	21-Mar-1994	0124Z
3790.4	CM3JY	21-Mar-1994	0056Z
3504.3	PJ9JT	21-Mar-1994	0049Z
3792.8	VP9IX	20-Mar-1994	2351Z
3800.0	J88AJ	20-Mar-1994	2334Z
3789.0	FG5FC	20-Mar-1994	2325Z
3792.8	VP9IX	20-Mar-1994	2351Z
3796.4	VP9MZ	20-Mar-1994	2346Z
3797.3	YU1FJK	20-Mar-1994	2345Z
3788.0	FG5FC	20-Mar-1994	2326Z
3796.4	VP9MZ	20-Mar-1994	2322Z
3512.0	EU6EU	20-Mar-1994	2257Z
3794.2	T97T	20-Mar-1994	2311Z
3788.9	LX1UN	20-Mar-1994	2252Z
3794.1	EA3NI	20-Mar-1994	2305Z
3789.0	C31SD	20-Mar-1994	2257Z
3506.4	VP9MZ	20-Mar-1994	2217Z
3500.8	V85KX	20-Mar-1994	1418Z
3789.5	DU1AK	20-Mar-1994	1414Z
3797.0	V63SD	20-Mar-1994	1339Z
3795.6	VK3DZM	20-Mar-1994	1155Z
3796.3	VK3TI	20-Mar-1994	1122Z
3794.1	JA1JRK	20-Mar-1994	1053Z
3501.6	HK7AAG	20-Mar-1994	0910Z
3770.0	1AGQ	20-Mar-1994	0545Z
3770.0	SM5GZ	20-Mar-1994	0543Z
3800.0	HA3HV	20-Mar-1994	0530Z
3790.3	CT1ESO	20-Mar-1994	0526Z
3794.6	IK8NSR	20-Mar-1994	0508Z
3514.3	TI4SU/5	20-Mar-1994	0511Z
3794.5	SM5GZ	20-Mar-1994	0455Z
3790.5	T9SM	20-Mar-1994	0425Z
3512.8	TI4SU/5	20-Mar-1994	0409Z
3511.5	UR7GR	20-Mar-1994	0349Z
3797.5	Z31PK	20-Mar-1994	0343Z
3507.8	UY5BA	20-Mar-1994	0345Z
3504.6	YO7APA	20-Mar-1994	0340Z
3508.1	TA2BK	20-Mar-1994	0305Z
3797.5	CM1GG	20-Mar-1994	0304Z
3507.0	OM3TDO	20-Mar-1994	0245Z
3794.5	S58MC	20-Mar-1994	0243Z
3505.5	OM3TDO	20-Mar-1994	0223Z
3506.7	FG5BP	20-Mar-1994	0151Z
3800.0	S54ZZ	20-Mar-1994	0138Z
3785.1	S58MC	20-Mar-1994	0133Z
3788.8	VP9ID	20-Mar-1994	0131Z
3508.4	OM3EY	20-Mar-1994	0141Z
3509.7	Z31VP	20-Mar-1994	0114Z
3510.0	PJ5JP	20-Mar-1994	0124Z
3509.3	OZ1CTK	20-Mar-1994	0123Z
3797.6	C31OF	20-Mar-1994	0059Z
3788.3	IT9PZM	20-Mar-1994	0033Z
3797.5	C31LU	20-Mar-1994	0015Z
3793.7	IK5PWJ	20-Mar-1994	0009Z
3506.9	VP9MZ	20-Mar-1994	0000Z
3791.2	PA0IJM	19-Mar-1994	2358Z
3799.6	S54ZZ	19-Mar-1994	2358Z
3797.2	C31OF	19-Mar-1994	2338Z
3800.0	KP2AD	19-Mar-1994	2349Z
3789.0	EA8BYR	19-Mar-1994	2346Z
3789.0	ZP5PT	19-Mar-1994	2332Z
3789.0	EA9KQ	19-Mar-1994	2331Z
3786.3	VP9IX	19-Mar-1994	2324Z
3798.3	AH8A	19-Mar-1994	1400Z
3508.2	HR1LW	19-Mar-1994	1155Z
3799.7	NH6XM	19-Mar-1994	1134Z
3794.3	JA1JRK	19-Mar-1994	1101Z
3796.2	VK3DZM	19-Mar-1994	1059Z
3511.0	ZL4OY	19-Mar-1994	1057Z
3502.3	XE1/JA1QXY	19-Mar-1994	1055Z
3789.0	6Y5IC	19-Mar-1994	1056Z
3502.0	LU8HF	19-Mar-1994	1006Z

80 METERS

3508.0	HP2CWB	19-Mar-1994	0943Z
3800.0	CT3FT	19-Mar-1994	0629Z
3800.0	FM5DN	19-Mar-1994	0619Z
3792.0	G3WMX	19-Mar-1994	0609Z
3799.6	EA9LZ	19-Mar-1994	0546Z
3789.1	EA3NI	19-Mar-1994	0513Z
3795.1	T97M	19-Mar-1994	0509Z
3789.1	EA4NI	19-Mar-1994	0505Z
3788.0	HR2CDG	19-Mar-1994	0452Z
3788.0	TL8NG	19-Mar-1994	0443Z
3797.0	I4AVZ	19-Mar-1994	0417Z
3515.0	TI4SU/5	19-Mar-1994	0416Z
3509.0	ZS6NW	19-Mar-1994	0402Z
3794.4	T97M	19-Mar-1994	0348Z
3799.2	SV1EX	19-Mar-1994	0340Z
3513.1	FG5FZ	19-Mar-1994	0337Z
3514.7	CO2VG	19-Mar-1994	0331Z
3506.1	UY5BA	19-Mar-1994	0331Z
3510.1	ZS6NW	19-Mar-1994	0332Z
3790.0	HA3HV	19-Mar-1994	0319Z
3507.2	5Z4FO	19-Mar-1994	0314Z
3506.0	5R8DG	19-Mar-1994	0255Z
3514.0	UY5BA	19-Mar-1994	0227Z
3792.0	VP9ID	19-Mar-1994	0149Z
3799.0	VP9MZ	19-Mar-1994	0139Z
3792.0	FM5DP	19-Mar-1994	0139Z
3799.0	VP9QV	19-Mar-1994	0134Z
3791.0	HA3HV	19-Mar-1994	0131Z
3791.0	IT9PZM	19-Mar-1994	0103Z
3505.9	6W6JX	19-Mar-1994	0049Z
3797.0	EA3JE	18-Mar-1994	2345Z
3506.6	T92A	18-Mar-1994	2333Z
3515.0	DL9GMM/5N0	18-Mar-1994	2301Z
3799.7	5T5JC	18-Mar-1994	2236Z
3799.9	JR3GIY	18-Mar-1994	1048Z
3785.9	CX7OXZ	18-Mar-1994	1038Z
3790.0	YV5AAX	18-Mar-1994	1032Z
3794.0	JA1JRK	18-Mar-1994	1025Z
3798.0	CE7OXZ	18-Mar-1994	1022Z
3793.7	LU8EEM	18-Mar-1994	1008Z
3798.0	CX9AU	18-Mar-1994	1003Z
3795.0	CE2CC	18-Mar-1994	1039Z
3520.0	CO2VG	18-Mar-1994	0821Z
3799.0	G3WMX	18-Mar-1994	0628Z
3792.0	TI9CF	18-Mar-1994	0625Z
3795.0	HR2BDC	18-Mar-1994	0539Z
3788.2	TL8NG	18-Mar-1994	0459Z
3791.0	CT1ESO	18-Mar-1994	0451Z
3788.2	T97T	18-Mar-1994	0426Z
3788.3	EA9IE	18-Mar-1994	0411Z
3796.0	TI9JJP	18-Mar-1994	0356Z
3798.0	VP5JM	18-Mar-1994	0224Z
3506.6	3B8CF	18-Mar-1994	0210Z
3798.0	VP5JM	18-Mar-1994	0139Z
3504.9	EA9AI	18-Mar-1994	0129Z
3789.6	IT9PZM	18-Mar-1994	0124Z
3795.0	VP5JM	18-Mar-1994	0039Z
3791.2	EA9KQ	18-Mar-1994	0037Z
3795.1	T97T	18-Mar-1994	0009Z
3797.0	TI9CF	17-Mar-1994	0557Z
3799.0	IS0GCD	17-Mar-1994	0528Z
3506.0	AH6ZB	17-Mar-1994	0519Z
3788.0	VP2MO	17-Mar-1994	0435Z
3797.1	TI9JJP	17-Mar-1993	0355Z
3799.4	Z31PK	17-Mar-1993	0354Z
3788.3	VP2MO	17-Mar-1993	0352Z
3789.1	CT1BVV	17-Mar-1994	0022Z
3794.0	7X2JF	17-Mar-1994	0023Z
3799.0	7X2DG	17-Mar-1994	0023Z
3507.9	V73C	16-Mar-1994	1212Z
3795.0	JA1JRK	16-Mar-1994	1028Z
3795.0	8P6CC	16-Mar-1994	0956Z
3795.0	TI9CF	16-Mar-1994	0606Z
3509.0	DJ9RB	16-Mar-1994	0511Z
3794.8	TI9CF	16-Mar-1994	0509Z
3506.3	PZ1DV	16-Mar-1994	0353Z
3795.0	TI9CF	16-Mar-1994	0338Z
3795.0	TI9CF	16-Mar-1994	0336Z

LOW BAND MONITOR POWER SPOTS - MARCH 1994

TNX: N8HTT - W8TN - W8UVZ - K9FD - VK4MZ - WAØGFS - W8AH - NI6T- W1WAi - N4JJ

160 METERS

1828.0	OE5KE	1-April-1994	0435Z
1825.0	ZA1J	1-April-1994	0423Z
1832.0	SV0HS	1-April-1994	0351Z
1846.0	CT9M	27-Mar-1994	0630Z
1846.0	YS1X	27-Mar-1994	0311Z
1827.0	AH8A	26-Mar-1994	1003Z
1847.0	VP2EC	26-Mar-1994	0545Z
1843.0	OT4A	26-Mar-1994	0507Z
1838.0	IO3MAU	26-Mar-1994	0446Z
1833.0	CT1AOZ	26-Mar-1994	0442Z
1840.0	YV1DRK	26-Mar-1994	0105Z
1835.0	EA8PP	26-Mar-1994	0102Z
1838.0	FK8CP	25-Mar-1994	1101Z
1834.0	GM3YOR	25-Mar-1994	0609Z
1832.1	S59A	24-Mar-1994	0447Z
1832.7	PY0FM	24-Mar-1994	0423Z
1840.0	SV8ZS	24-Mar-1994	0411Z
1830.0	YU7AU	24-Mar-1994	0403Z
1831.9	IT9ZGY	24-Mar-1994	0344Z
1840.0	PY0FM	24-Mar-1994	0342Z
1833.3	UT0CT	24-Mar-1994	0320Z
1831.0	HP1XBH	24-Mar-1994	0317Z
1828.9	LZ1WR	24-Mar-1994	0224Z
1830.3	IT9ZGY	23-Mar-1994	0502Z
1840.0	EA3JE	23-Mar-1994	0035Z
1837.3	RV6ALX	23-Mar-1994	0022Z
1840.0	TG9NX	22-Mar-1994	0518Z
1835.3	ON8RD	22-Mar-1994	0512Z
1821.3	UE3UFD	22-Mar-1994	0447Z
1840.0	SV8ZS	22-Mar-1994	0424Z
1828.4	4N7ZZ	22-Mar-1994	0418Z
1833.7	YL2DX	22-Mar-1994	0359Z
1842.0	TA2DS	22-Mar-1994	0119Z
1835.7	RV6ALX	22-Mar-1994	0049Z
1846.0	HP1XBH	21-Mar-1994	0300Z
1832.6	VP2VI	21-Mar-1994	0105Z
1869.9	OM3CGP	20-Mar-1994	1450Z
1836.2	VK6ACY	20-Mar-1994	1301Z
1829.4	VK3ZL	20-Mar-1994	1104Z
1845.0	AL7MX	20-Mar-1994	1024Z
1835.0	G3YRO	20-Mar-1994	0528Z
1830.7	ON7PQ	20-Mar-1994	0527Z
1831.0	VE3AFD/F9	20-Mar-1994	0519Z
1834.6	DK7SU	20-Mar-1994	0456Z
1840.0	EA8PP	20-Mar-1994	0502Z
1836.0	TL8NG	20-Mar-1994	0448Z
1830.0	OM3OMC	20-Mar-1994	0429Z
1828.9	SV8ZS	20-Mar-1994	0420Z
1832.8	IT9ZGY	20-Mar-1994	0406Z
1843.0	YS1JRG	20-Mar-1994	0356Z
1832.0	S59A	20-Mar-1994	0354Z
1841.0	N4KE/VP5	20-Mar-1994	0149Z
1826.3	VQ9SS	20-Mar-1994	0035Z
1835.2	EW8DX	19-Mar-1994	2335Z
1832.4	4U1ITU	19-Mar-1994	2331Z
1825.8	VQ9QM	19-Mar-1994	2329Z
1834.0	UC2WJ	19-Mar-1994	2326Z
1825.0	FK8/DK7PE	19-Mar-1994	1126Z
1840.0	ZL2IK	19-Mar-1994	0645Z
1840.0	AH8A	19-Mar-1994	0608Z
1830.0	IV3PRK	19-Mar-1994	0516Z
1828.9	ZA1BM	19-Mar-1994	0453Z
1828.6	SV8ZS	19-Mar-1994	0351Z
1833.4	IT9ZGY	19-Mar-1994	0353Z
1834.9	S59A	19-Mar-1994	0337Z
1830.5	DK7SU	19-Mar-1994	0333Z
1832.2	FG5BG	19-Mar-1994	0325Z
1831.0	TU2MA	19-Mar-1994	0136Z
1831.7	OM3TQX	18-Mar-1994	2358Z
1844.9	TG9NX	18-Mar-1994	0607Z
1832.9	TI9CF	18-Mar-1994	0559Z
1832.2	VP2VI	18-Mar-1994	0459Z
1830.7	IV3YYK	18-Mar-1994	0455Z
1833.0	TI9CF	18-Mar-1994	0445Z
1833.4	SV8ZS	18-Mar-1994	0435Z
1832.1	IT9ZGY	18-Mar-1994	0427Z
1828.9	YU7AU	18-Mar-1994	0422Z
1830.9	FG5BG	18-Mar-1994	0308Z

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1830.0	EA3VY	18-Mar-1994	0243Z
1847.6	EA8PP	17-Mar-1994	0553Z
1833.2	TI9CF	17-Mar-1994	0541Z
1831.0	IV3PRK	16-Mar-1994	0511Z
1828.2	OE1KE	16-Mar-1994	0505Z
1830.0	IT9ZGY	16-Mar-1994	0447Z
1840.0	I3MAU	16-Mar-1994	0444Z
1831.8	S59A	16-Mar-1994	0328Z
1828.3	YL2GT	16-Mar-1994	0244Z
1833.0	YO3AC	16-Mar-1994	0240Z
1834.0	UY5UZ	16-Mar-1994	0044Z
1843.0	ZL2JR	15-Mar-1994	0644Z
1843.0	G3GSI	15-Mar-1994	0555Z
1836.9	ON7PQ	15-Mar-1994	0546Z
1830.0	ON6KD	15-Mar-1994	0529Z
1829.4	OE5NNN	15-Mar-1994	0513Z
1845.0	IK1MNJ	15-Mar-1994	0512Z
1827.2	DK7SU	15-Mar-1994	0454Z
1828.9	OM3OMC	15-Mar-1994	0450Z
1846.0	SV3AQR	15-Mar-1994	0443Z
1832.0	KP4TQ	15-Mar-1994	0441Z
1842.2	I3MAU	15-Mar-1994	0441Z
1838.0	OK1DOT	15-Mar-1994	0439Z
1836.5	SV8ZS	15-Mar-1994	0444Z
1836.0	TL8NG	15-Mar-1994	0433Z
1835.0	SP5INQ	15-Mar-1994	0427Z
1829.3	YU7AU	15-Mar-1994	0419Z
1827.1	YO3APJ	15-Mar-1994	0418Z
1826.7	YO3RF	15-Mar-1994	0415Z
1826.9	SM4CAN	15-Mar-1994	0408Z
1824.2	DK7SU	15-Mar-1994	0408Z
1836.2	ON8RD	15-Mar-1994	0406Z
1835.0	ER2GR	15-Mar-1994	0404Z
1830.6	S59A	15-Mar-1994	0358Z
1827.0	A22MN	15-Mar-1994	0354Z
1832.0	IT9ZGY	15-Mar-1994	0349Z
1829.7	ZS5LB	15-Mar-1994	0348Z
1831.4	4X4NJ	15-Mar-1994	0347Z
1843.0	PY0FM	15-Mar-1994	0343Z
1830.0	ZS5LB	15-Mar-1994	0324Z
1832.4	DK7SU	15-Mar-1994	0315Z
1830.1	OM3BRK	15-Mar-1994	0311Z
1834.8	YO3AC	15-Mar-1994	0304Z
1843.0	UX0ZZ	14-Mar-1994	2246Z
1840.0	SV8ZS	14-Mar-1994	0447Z
1834.2	KP4TQ	14-Mar-1994	0359Z
1830.0	S59A	14-Mar-1994	0340Z
1830.5	CL3OV	14-Mar-1994	0251Z
1837.0	6W6JX	14-Mar-1994	0241Z
1835.3	UA3PTW	14-Mar-1994	0150Z
1832.0	9K2MU	14-Mar-1994	0126Z
1841.8	TG9NX	13-Mar-1994	0655Z
1842.9	ZL2JR	13-Mar-1994	0624Z
1840.1	GU2FRO	13-Mar-1994	0614Z
1834.4	OE5NNN	13-Mar-1994	0508Z
1833.0	S59A	13-Mar-1994	0507Z
1832.3	DK7SU	13-Mar-1994	0505Z
1840.0	I3MAU	13-Mar-1994	0504Z
1834.0	IV3PRK	13-Mar-1994	0458Z
1829.4	OE6IMD	13-Mar-1994	0449Z
1836.0	SV8ZS	13-Mar-1994	0447Z
1832.2	D2PZ	13-Mar-1994	0441Z
1844.0	EA8PP	13-Mar-1994	0434Z
1832.0	TI2PZ	13-Mar-1994	0434Z
1831.4	SM5EDX	13-Mar-1994	0424Z
1828.1	YO3APJ	13-Mar-1993	0411Z
1834.0	EW3LB	13-Mar-1994	0407Z
1843.9	UT8NA	13-Mar-1994	0402Z
1839.3	UY0ZA	13-Mar-1994	0400Z
1833.2	ZS5LB	13-Mar-1994	0402Z
1828.4	OK1AEZ	13-Mar-1993	0340Z
1835.8	KG4CB	13-Mar-1994	0336Z
1831.9	VP9MZ	13-Mar-1994	0333Z
1828.5	OK1AEZ	13-Mar-1994	0313Z
1827.5	S59A	13-Mar-1994	0307Z
1831.7	UT0CT	13-Mar-1994	0223Z
1832.5	UT4UZ	13-Mar-1994	0215Z
1839.3	EA5TX	12-Mar-1994	2356Z

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1829.2	VQ9SS	13-Mar-1994	0001Z
1826.0	C21/4I	12-Mar-1994	1409Z
1832.4	ON4UN	12-Mar-1994	2349Z
1829.2	VQ9SS	12-Mar-1994	2333Z
1832.0	LZ1WR	12-Mar-1994	2328Z
1835.0	ZD8M	12-Mar-1994	2312Z
1826.0	C21/4I	12-Mar-1994	1409Z
1843.5	G3YRO	12-Mar-1994	0612Z
1834.5	KG4CB	12-Mar-1994	0535Z
1824.5	DJ7RD	12-Mar-1994	0528Z
1842.0	I3MAU	12-Mar-1994	0516Z
1831.7	I2BBJ	12-Mar-1994	0511Z
1838.6	OK1DOT	12-Mar-1994	0501Z
1829.7	S59A	12-Mar-1994	0503Z
1828.2	DK7SU	12-Mar-1994	0458Z
1834.6	OM3CSQ	12-Mar-1994	0450Z
1832.6	OM3EY	12-Mar-1994	0447Z
1832.0	OE5KE	12-Mar-1994	0444Z
1834.0	SV8ZS	12-Mar-1994	0432Z
1831.0	CL3LV	12-Mar-1994	0430Z
1844.7	SV3KH	12-Mar-1994	0426Z
1823.9	HB9US	12-Mar-1994	0426Z
1834.6	UT0CT	12-Mar-1994	0411Z
1838.1	UY5BA	12-Mar-1994	0422Z
1828.5	OK2PWJ	12-Mar-1994	0422Z
1845.0	SV8ZS	12-Mar-1994	0420Z
1826.7	YL2SM	12-Mar-1994	0421Z
1833.7	EW3LB	12-Mar-1994	0407Z
1829.8	S59A	12-Mar-1994	0409Z
1835.5	IT9ZGY	12-Mar-1994	0405Z
1842.0	I3MAU	12-Mar-1994	0357Z
1831.4	IV3PRK	12-Mar-1994	0352Z
1834.0	ES0RI	12-Mar-1994	0338Z
1832.4	UR5IUQ	12-Mar-1994	0332Z
1850.0	DF3GY	11-Mar-1994	0526Z
1842.0	I3MAU	11-Mar-1994	0519Z
1833.4	IT9ZGY	11-Mar-1994	0508Z
1826.2	OE5NNN	11-Mar-1994	0504Z
1845.0	I6FLD	11-Mar-1994	0502Z
1840.0	SV8ZA	11-Mar-1994	0450Z
1840.0	SV9ANH	11-Mar-1994	0448Z
1840.0	SV8ZS	11-Mar-1994	0434Z
1826.2	OE5KE	11-Mar-1994	0431Z
1833.5	IV3PRK	11-Mar-1994	0405Z
1831.9	UR8UN	10-Mar-1994	0412Z
1826.1	DJ7RD	10-Mar-1994	0408Z
1829.3	OK1DQT	10-Mar-1994	0405Z
1833.8	UT0CT	10-Mar-1994	0404Z
1831.5	4X4NJ	10-Mar-1994	0401Z
1828.4	4N7ZZ	10-Mar-1994	0038Z
1831.5	F6BLP	9-Mar-1994	0611Z
1830.8	IT9ZGY	9-Mar-1994	0531Z
1832.9	SM6CPY	9-Mar-1994	0506Z
1827.9	OE5KE	9-Mar-1994	0505Z
1842.0	OK1DOT	9-Mar-1994	0502Z
1834.1	HB9FAF	9-Mar-1994	0457Z
1832.4	DK7SU	9-Mar-1994	0456Z
1841.0	PY0FM	9-Mar-1994	0439Z
1834.6	YO3AC	9-Mar-1994	0422Z
1832.2	4N7ZZ	9-Mar-1994	0402Z
1845.0	SV8ZS	9-Mar-1994	0402Z
1830.6	US5EHL	9-Mar-1994	0355Z
1841.0	YO3AC	9-Mar-1994	0356Z
1832.0	4X4NJ	9-Mar-1994	0353Z
1832.8	EW3LB	9-Mar-1994	0348Z
1840.5	UX0ZZ	9-Mar-1994	0224Z
1833.8	HB9FAX	9-Mar-1994	0019Z
1832.0	CO2RP	8-Mar-1994	1104Z
1830.0	VP5/WE3C	8-Mar-1994	0400Z
1824.0	DL6EN	8-Mar-1994	0253Z
1829.2	OM3CQR	8-Mar-1994	0207Z
1834.3	YO3TC	8-Mar-1994	0014Z
1831.8	4X4NJ	7-Mar-1994	0350Z
1831.0	UC2WAF	7-Mar-1994	0335Z
1850.0	YV5ABH	7-Mar-1994	0316Z
1833.8	G3PQA	7-Mar-1994	0118Z
1835.0	ZD8M	7-Mar-1994	0054Z
1836.0	TL8NG	7-Mar-1994	0440Z